REMARKS

Claims 1-20 were presented for examination. The Office Action dated May 29, 2007 rejects claims 1-4, 7-9, 10, 11, 13-16, and 19-20, and objects to claims 5, 6, 10, 12, 17 and 18. The Office Action indicates that claims 5, 6, 10, 12, 17, and 18 would be allowable if rewritten in independent form. Applicant thanks the Examiner for identifying allowable subject matter in the present application.

This response amends claims 1, 5, 9-11, 14, 17, and 19. Amendments to claims 5, 9, 17, and 19 are to restore consistency of antecedent basis after the amendment to the independent claims 1 and 14. Claims 1-20 remain pending in the application.

Claim Rejections under 35 U.S.C. § 112

The Office Action rejects claim 10 under 35 U.S.C. § 112, second paragraph, for being indefinite because the limitation "the communication system" lacks an antecedent basis. Applicant has appropriately amended claim 10 to overcome the rejection. Applicant thanks the Examiner for pointing out the inadvertency.

Claim Rejections under 35 U.S.C. § 103

The Office Action rejects claims 1-4, 7-9, 11, 13-16, and 19-20 under 35 U.S.C. § 103 as being unpatentable over Iacovino (U.S. Publication No. 2004/0085954) in view of Chen (U.S. Patent No. 7,170,851). Applicant respectfully traverses the rejection because Iacovino and Chen, whether taken alone or in combination, do not disclose or suggest every element and limitation of the Applicant's invention as now claimed.

As now set forth in representative claim 1, the Applicant's invention communicates protection-signaling information between cards in a network element. A first card of a network element receives an incoming signal from over a network. Protection-signaling information obtained from the incoming signal is incorporated into a first out-of-band signal and transmitted from the first card to a second card in the network element over a link between the cards. The second card incorporates protection-signaling information into a second out-of-band signal. The second card transmits this second out-of-band signal to the first card over the link. Thus, in the Applicant's invention, out-of-band signals are bi-directionally exchanged over a given link: from the first card to the second card and from the second card to the first card.

In contrast, Iacovino teaches *unidirectional* out-of-band signaling: from a line module to the switch module. (Please see FIG. 6 and FIG. 7, which both show a unidirectional arrow from the line modules to the switch module to illustrate the out-of-band communication link). In response to the out-of-band signal from a line module, Iacovino's switch module selects the best STS-1 from among the protect/working pair and sends an STS-48 sized payload back to the line module. (Please see paragraph [0052]]. However, when the switch module sends this STS payload back to the line module, the switch module does not use out-of-band signaling – by implication, transmission of the STS traffic stream from the switch module to the line module occurs in-band (please see paragraph [0049]). Therefore, Iacovino does not teach or suggest the Applicant's claimed invention, in which each of the first and second cards sends protection-signaling information to the other card in an out-of-band signal over a link.

Chen discloses a system for automatic topology provisioning for SONET networks. Although Chen's system does have tributary cards and cross-connect cards, Chen does not provide any teaching regarding the use of out-of-band signaling to communicate between such cards. Therefore, Chen cannot teach or suggest the bi-directional out-of-band signaling of the Applicant's claimed invention. More specifically, Chen does not disclose or suggest transmitting a first out-of-band signal with protection-signaling information therein from a first card to a second card over a link and transmitting a second out-of-band signal with protection-signaling information therein from the second card to the first card over the link, as now set forth in the Applicant's claimed invention. Consequently, any combination of Chen with Iacovino will not produce the *bi-directional* out-of-band signaling between cards of the Applicant's invention. Accordingly, Applicant respectfully requests that the rejection be withdrawn.

Each of the other independent claims recites language similar to that recited in claim 1, and therefore is patentable over Iacovino and Chen for at least those reasons provided in connection with claim 1.

Each dependent claim depends directly or indirectly from one of the patentable independent claims, and incorporates all of its respective limitations and, therefore, is patentably distinguishable over the cited references for at least those reasons provided in connection with the independent claims. Each dependent claim also recites an additional limitation, which, in combination with the elements and limitations of its independent claim, further distinguishes that dependent claim from the cited references. Applicant respectfully requests withdrawal of the rejection of these claims.

CONCLUSION

In view of the amendments and arguments made herein, Applicants submit that the application is in condition for allowance and requests early favorable action by the Examiner.

If the Examiner believes that a telephone conversation with the Applicants' representative would expedite allowance of this application, the Examiner is cordially invited to call the undersigned at (508) 303-0932.

Respectfully submitted,

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